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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,371	06/06/2001	Andreas Leupolz	843/49983	2725

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EXAMINER

COLLINS, TIMOTHY D

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 04/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,371

Applicant(s)

LEUPOLZ ET AL.

Examiner

Timothy D Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 6/6/01 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because there are not translations of the entire documents and it is unclear as to the question of relevance from the translated abstracts that were sent. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Specification

2. The disclosure is objected to because of the following informalities:

a. In line 21 of page 2, the word [that] should be --than--.

Appropriate correction is required.

Claim Objections

3. Claim 5 is objected to because of the following informalities: in line 2, the phrase [a desired] should be deleted because it is a duplicate. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,178,034 to Allemand et al. (herein after called 034) and in view of USPN 6,055,088 to Fix et al. (herein after called 088).

a. Re claims 1, 16, and 17-22, reference 034 discloses a method of improving passenger comfort in a vehicle (line 32-35 of column 13) with interior surfaces, comprising applying a heat-reflecting coating (ITO in lines 1-5 of column 5) with a low thermal emission coefficient (IR blocking in line 30 of column 4) to an interior surface (line 32-35 of column 13), with the coating capable of a direct radiation exchange with a passenger. 034 however does not directly state that the coating is used in an aircraft, however 088 does teach of a heat-reflecting coating used in an aircraft in lines 34-35 of column 14. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of 088 into the device of 034 so as to coat aircraft windows (instead of car sunroofs as taught by 034) to protect the interior for transmitted heat and also for the added benefit of keeping the upholstery from fading. The limitations of a

lateral covering part are also shown in 088 in line 36 of column 14, because a windscreen or window is a lateral covering part, since it is on the sides or lateral parts of the aircraft. The limitations of an aircraft glazing see 088 line 35 of column 14. With regard to the limitations of a coating applied to an interior cabin wall, the windows of 088 also meet this limitation since the windows are interior cabin walls, because they separate the inside from the outside of the aircraft. For reasoned statement of obviousness see above.

- b. Re claim 2, 034 discloses that the coating is a transparent conductive coating (line 46-47 of column 4, and column 5 lines 1-5).
- c. Re claim 3, 034 discloses that the coating is a conductive metal oxide coating (line 46-47 of column 4, and column 5 lines 1-5).
- d. Re claim 4, 034 discloses that the coating comprises ITO (line 46-47 of column 4, and column 5 lines 1-5).
- e. Re claim 5, 034 discloses selecting a coating thickness, however it does not specifically mention that this thickness is to achieve a desired thermal emission coefficient, in lines 1-5 of column 5. But it would have been obvious to one of ordinary skill in the art to select the thickness to achieve a desired thermal emission coefficient, since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

- f. Re claim 6, 034 discloses that the thickness of the coating is less than 1 micron, in lines 5-8 of column 5.
- g. Re claim 7, see rejection of claim 1, for the limitation of more than one window, see the 088 reference and its use of the word "windscreens" in line 35 of column 14.
- h. Re claim 8, 034 discloses the use of PMMA in line 36 of column 14.
- i. Re claim 9, 034 discloses that the windows comprise PC in line 7 of column 4.
- j. Re claims 13 and 14, 034 does not specifically disclose that the coating has a thermal emission factor of less than 0.5. However 034 does state that the coatings are IR blocking, and it is well known in the art that IR energy is a form of thermal energy, therefore it can be taken that an IR blocking coating is a low thermal emission coating. From this it can then be said that the emission factor is less than 0.5 because 0.5 is the midpoint between perfect reflector (0) and a perfect emitter (1), meaning that a value of less than 0.5 would be blocking, and more than 0.5 would be able to transmit the IR energy. Therefore it would have been obvious to assign the value of thermal emissivity a 0.5 or less and more probably 0.1 - 0.3 for an IR or thermal blocking coating, so as to block the thermal energy as stated in 034 line 30 of column 4. For more proof of thermal blocking and the range of 0.1 – 0.3 see 088 in the examples in the tables throughout, all the thermal emissivities are less than 50 % (0.5) and most fall in the range of 0.1 – 0.3 or 10% to 30%.

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6. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,178,034 to Allemand et al. (herein after called 034) and in view of USPN 6,055,088 to Fix et al. (herein after called 088) as applied to claims 1-9, and 13-22 above, and further in view of USPN 6,092,915 to Rensch (herein after called 915).

k. Re claim 10, 034 as modified does not disclose that the interior of the aircraft has a decorative plastic foil or that the coating is applied to the foil, but 915 does disclose a plastic foil in an aircraft in lines 1-10 of column 3 and also in lines 39-43 of column 1. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of 915 into the device of 034 as modified above, so as to allow for the opacity of the background of the foil to change and also to allow for the blockage of IR energy from passing through the clear cover of the foil to keep the heat away from the passengers of the aircraft that may be near the decorative foil.

l. Re claims 11 and 12, 034 does not disclose that the foil is made of PVF or PVDF however 915 does teach of PVF and PVDF, in lines 1-6 of column 3. Therefore it would have been obvious to one of ordinary skill in the art to have made the foil out of these materials so as to make the foil flexible and easy to manufacture as well as to make it durable and shield light sources from view as taught in 915 in the abstract.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- m. USPN 5783049 discloses coatings.
- n. USPN 6063479 discloses coatings.
- o. USPN 6362303 discloses coatings.
- p. USPN 6249369 discloses coatings.
- q. USPN 6262364 discloses coatings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D Collins whose telephone number is 703-306-9160. The examiner can normally be reached on M-Th, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 703-308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4180.

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tdc

March 29, 2002

Robert P. Swiatek

ROBERT P. SWIATEK

PRIMARY EXAMINER

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